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Title: Defining Status of Marine Mammals

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Student:

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Abstract: The concept of "status" is central to U.S. legal frameworks for conserving marine mammals. The Marine Mammal Protection Act defines status based on a comparison of estimated current stock size and optimum sustainable population range. Status under the Endangered Species Act (ESA) represents not so much a species' current state as its projected probability of becoming extinct or endangered in the foreseeable future. For Florida manatees, status is hotly debated. Human population growth, ongoing and anticipated loss of habitat (especially natural and anthropogenic warm-water refugia), and rising boat-related mortality constitute significant future threats to the species, and its endangered status therefore seems appropriate. The conservation of manatees depends on our ability to anticipate and mitigate such threats. Quantitative criteria recently developed for endangered large whales suggest they retain their endangered status if their probability of extinction is equal to or greater than 1% over the next 100 years. If a) that criterion is applied to ice-dependent marine mammals, and b) climate change results in model-projected reductions in polar ice and species' perseverance, then the status of a whole suite of marine mammals (including the now most numerous marine mammal on earth, the ringed seal) may reasonably be assessed as endangered or threatened. Is this a quirk or shortcoming of the ESA or a sobering prognosis for polar ecosystems and associated marine mammals. We believe the latter and provide suggestions for responsible action: statutory definitions of "status" must be made clear and comprehensive; projections of species' extinction risk must account for relevant environmental and anthropogenic changes (e.g., loss or degradation of habitat, demographic and health changes) expected to occur within the species' range during the projected period; and the public and decision-makers must be better informed regarding the nature and consequences of potential threats such as climate warming.